inspector portable computer 164 communicates with a firewall server 166. The firewall server 166 in turn communicates with a main server 170.

A plurality of modules are in turn are executed on the main server 170. The modules include a new project module 171, a project information module 172, a new contract module 173, a closure module 174 and a search module 175. The new project module 171 creates and initializes database structures for a new project. The project information module 172 provides management and accounting reports associated with a particular project. The new contract module 173 creates and initializes database structures for a new contract. The search module 175 searches for information relating a particular project or contract. The closure module 174 generates various final inspection reports and authorization for final payments. Additionally, the main server 170 executes a key indicator status (KIS) summary status module 176 that tracks the projects in terms of overall dollars and schedule time and provides at a quick glance whether each project is ahead of schedule or over/under budget.

Various reporting modules are also executed on a server 170. These modules include, but are not limited to, a daily report module 167, a monthly report module 168, and an estimate report module 169. Additionally, a change order module 177 performs the document management involved in sending out requests for information and eventually the change orders on a contract.

Referring now to Fig. 4, processes executed on the portable computer 164 of Fig. 3 are shown. In Fig. 4, a plurality of inspector portable computers 182, 184, and 186 communicate with a telephone company terminal 188. The terminal 188 can communicate over the POTS network. The terminal 188 is connected to one or more modems 190, 192, and 194. The modems 192 and 194 in turn transfer information to a dialup server 200 which contains a project database. The dialup server 200 communicates with a database

administrator workstation 202, which allows a database administrator to maintain and operate the various databases. The dialup server 200 also communicates through a network connection to a main project server 210 which contains a planning design and construction project database. The server 210 also contains an archival database for all closed projects. The main project server 210 also communicates with a project manager workstation 212 and an engineering/estimator workstation 214. The main project server 210 also communicates with a web site administrator workstation 216 which allows an administrator to manage the web site. The main project server 210 also communicates through the network connection to a web server 220. The web server 220 contains one or more project specific web sites so that the sites can be publicly accessed using the Internet. The web server 220 and the project-specific web site can host the reports generated from the Integrated Construction Project Management System (ICPMS) by saving to a specific folder related to each individual project. The project specific web site can be secured so that only people associated with the project can see reports from the web site.

The daily projects database contains folders with database files associated with a particular project. After initializing the construction database and performing a new project set up, a resident engineer or a field inspector posts daily reports or daily field journals which track on a daily basis the progress of the work. Each day, the inspector downloads a subset of the master database from the contract database that would only include the project information related to the projects being reviewed that day. At the end of the day, each inspector updates information for his reviewed project(s) and uploads or transmits that information back to the daily project folders in the contract database.

A field inspector can select the projects that he or she is interested in uploading and downloading. The uploading/downloading processes populate databases on the firewall

server. A project estimator initially sets up a project folder. If a new project is uploaded to a folder on the firewall server network, a unique project folder is created on the dialup server with the following naming convention: a file folder name that correlates to the project number and an assigned contract number and uploads project data into the project folder. If the project already exists, the system simply copies the project data into a new project folder on the server network.

Subsequently, the inspector sets up a dialup connection, logs-in with the appropriate authorization, and invokes an upload/download menu. The inspector selects a new project that's on the list and downloads information associated with the selected project to his laptop or portable computer. The information includes data on costs, schedules, bid items, and change orders, among others. Once downloaded, the inspector can update the bid item quantities delivered and field progress information for the project. At the end of the day, the inspector runs a daily field report - daily field journal which includes information on the work performed for that day. The report can also cover a range of days, so that if the inspector has been out on a job all week and has been filling out daily field journals every day, a range of days can be selected for transmission once.

After the firewall server has been updated, the estimator can repopulate the master database to make it current. The estimator connects to this firewall server and selects one or more projects to refresh the master database. The updating the master database is done with a SQL command which keys off of the project number and the contract as the primary keys.

Pseudo-code for the synchronization of project information between the inspector's computer and the server is as follows:

Steps done by the Estimator/DB Administrator